

**CITY OF SCOTTSDALE
PLANNING AND DEVELOPMENT SERVICES DEPARTMENT**

**INTERPRETATIONS & APPLICATIONS
OF BUILDING CODES & REGULATIONS #87-7**



CODE SECTION : UBC 1506, UPC App.D

5/6/96

SUBJECT : ROOF DRAINAGE

Rainwater systems shall be designed in accordance with Appendix D of the Uniform Plumbing Code (UPC).

All roofs shall be designed with a primary slope of not less than 1/4 inch per foot (UBC Section 1506.1). Secondary slopes, such as valleys, crickets or sloping ledgers, shall be not less than 1/8 inch per foot to point of drainage off the roof. Such slope shall be in addition to designed camber to assure adequate drainage after long-time deflection from dead load.

EXCEPTION: Roofs may have less slope than required above when a rational structural analysis is performed by a structural engineer to assure stability and strength under ponding conditions and the stiffness of the structural members are at least that given by: $EI = 225TL^3$ where T is the tributary area supported by the member in square feet, and L is span length in feet.

Design rate of rainfall shall be a minimum of 6 inches per hour, based upon a 5 minute duration. Ponding loads need not be considered as occurring simultaneously with other live loads.